

Serial No.: 10/672,093
Group Art Unit: 2818

AMENDMENTS TO CLAIMS

- Please amend pending claims 1, 6, and 10 as indicated below. A complete listing of all claims and their status in the application are as follows:

1. (currently amended) A method of manufacturing an integrated circuit comprising:

forming a charge-trapping dielectric layer over a semiconductor substrate;

forming first and second bitlines in the semiconductor substrate;

forming a wordline over the charge-trapping dielectric layer; and

forming ~~a dielectric~~ an interlayer dielectric layer over the wordline wherein for a structure selected from at least one of the charge-trapping dielectric layer, the wordline, the interlayer dielectric layer, and a combination thereof, the structure contains deuterium diffused from another structure selected from at least one of the charge-trapping dielectric layer, the wordline, the interlayer dielectric layer, and a combination thereof.

2. (previously presented) The method of manufacturing an integrated circuit as claimed in claim 1 wherein the forming includes forming deuterated materials for a structure selected from at least one of the charge-trapping dielectric layer, the wordline, the interlayer dielectric layer, and a combination thereof.

3. (previously presented) The method of manufacturing an integrated circuit as claimed in claim 1 including deuterating a structure selected from at least one of the charge-trapping dielectric layer, the wordline, the interlayer dielectric layer, and a combination thereof.

4. (previously presented) The method of manufacturing an integrated circuit as claimed in claim 1 wherein the forming the charge-trapping layer, the wordline, and the interlayer dielectric layer deposits materials selected from at least one of a deuterated silicon oxide, a deuterated silicon nitride, a deuterated silicon oxynitride, a polysilicon, a glass, and a combination thereof.

5. (previously presented) The method of manufacturing an integrated circuit as claimed in claim 1 wherein the forming the charge-trapping layer, the wordline, and the

Serial No.: 10/672,093

Group Art Unit: 2818

interlayer dielectric layer uses a process selected from at least one of high-density plasma deposition, rapid thermal chemical vapor deposition, low pressure chemical vapor deposition, rapid thermal oxidation, annealing in deuterium gas, and a combination thereof.

6. (currently amended) A method of manufacturing an integrated circuit comprising:

forming a first dielectric layer on a semiconductor substrate;

forming a charge-trapping layer over the first dielectric layer;

forming a second dielectric layer over the charge-trapping layer;

forming first and second bitlines in the semiconductor substrate;

forming a wordline over the second dielectric layer;

forming a spacer around the wordline and on the second dielectric layer; and

forming an interlayer dielectric layer over the wordline wherein for a structure selected from at least one of the first dielectric layer, the second dielectric layer, the wordline, the spacer, the interlayer dielectric layer, and a combination thereof is deuterated, the structure contains deuterium diffused from another structure selected from at least one of the first dielectric layers, the charge-trapping layer, the second dielectric layer, the wordline, the spacer, the interlayer dielectric layer, and the combination thereof.

7. (previously presented) The method of manufacturing an integrated circuit as claimed in claim 6 wherein the forming includes forming deuterated materials for a structure selected from at least one of the first dielectric layer, the charge-trapping layer, the second dielectric layer, the wordline, the spacer, the interlayer dielectric layer, and a combination thereof.

8. (previously presented) The method of manufacturing an integrated circuit as claimed in claim 6 including deuterating a structure selected from at least one of the first dielectric layer, the charge-trapping layer, the second dielectric layer, the wordline, the spacer, the interlayer dielectric layer, and a combination thereof.

9. (previously presented) The method of manufacturing an integrated circuit as claimed in claim 6 wherein the forming the first dielectric layer, the charge-trapping layer, the

Serial No.: 10/672,093
Group Art Unit: 2818

second dielectric layer, the wordline, the spacer, and the interlayer dielectric layer deposits materials selected from at least one of deuterated silicon oxide, a deuterated silicon nitride, a deuterated silicon oxynitride, a polysilicon, a glass, and a combination thereof.

10. (currently amended) The method of manufacturing an integrated circuit as claimed in ~~claim 4~~ claim 6 wherein the forming the first dielectric layer, the charge-trapping layer, the second dielectric layer, the wordline, the spacer, and the interlayer dielectric layer uses a process selected from at least one of high-density plasma deposition, rapid thermal chemical vapor deposition, low pressure chemical vapor deposition, rapid thermal oxidation, annealing in deuterium gas, and a combination thereof.

11-20 (cancelled)